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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,323	02/13/2002	Pat S. Chavez JR.	SUR-3678	4551

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EXAMINER

SUNG, CHRISTINE

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 08/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/073,323	CHAVEZ ET AL.
	Examiner	Art Unit
	Christine Sung	2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 February 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-4, 6-10 and 12 is/are rejected.

7) Claim(s) 5 and 11 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 13 February 2002 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

4) Interview Summary (PTO-413) Paper No(s) _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 4, paragraph 6, line 2, the specification reads "rationing" but should read -- ratioing--.

On page 6, paragraph 10, line 6, the specification reads "the second, reference, beam" but should read -- the second reference beam -- in order to correct a minor grammar error.

Appropriate correction is required.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Objections

3. Claims 2-3 and 8-9 are objected to because of the following informalities:

The claims are objected to for being indefinite and for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims select parameters based upon a group of parameters or a combination from the group of parameters. However, it is unclear as to which parameter the invention is claiming in particular.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-4, 6-10 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (US Patent 6,161,075).

Regarding independent claims 1 and 7, Cohen discloses a method for monitoring surface parameters comprising: Collecting spectral measurements in two spectral bands using radiometers to cover the different spectral bands (column 29 lines 45-50 and column 30 lines 43-49);

Applying subtraction techniques to remove the effect of sun elevation and cloud cover variations (column 30, lines 6-9, column 31, lines 32-35, claims 7 and 14);

Calibrating the resulting values to known values (claims 7 and 14);

And monitoring the surface parameters of interest (claims 7 and 14); Cohen does not specifically disclose the use of a ratioing technique, however, it is well known in the art to use subtraction or ratioing or integration techniques to remove erroneous readings. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a subtraction/integration technique as disclosed by Cohen in claims 7 and 14 to remove the errors received in the measurements, since substituting one technique for another is well known in the art.

Regarding claims 2-3 and 8-9, Cohen does not specify the type of surface parameter, therefore since he does not limit the type of surface parameter to be measured, it is within the scope of Cohen's invention to measure surface parameters such as vegetation density or cover and turbidity in water, or suspended sediment concentration, since all these are considered surface parameters.

Regarding claim 4 and 10, Cohen discloses that the 2 spectral band measurements are in the visible and IR ranges (Claims 7, 14, and column 29 lines 45-50, column 30, lines 43-49).

Regarding claims 6 and 12, Cohen does not place a limit on the operational time interval of the spectral measurements, and since it is used with a satellite sensor, the range disclosed in the invention is well within the workable range of the Cohen reference. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the claimed spectral measurement time with the invention as disclosed by Cohen.

Allowable Subject Matter

7. Claims 5 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 5 and 11, none of the prior art of record discloses such a ratio formula. Although many disclose a subtraction or ratio technique similar to the one disclosed, none of the reference disclose the specific relationship as disclosed in the claims, namely the specific relationship between the radiance of the first spectra (IR) and the radiance of the second spectra (visible red).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 703-305-0382. The examiner can normally be reached on Monday- Friday 7-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-0956 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CS
August 6, 2003



DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800